AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): The fiber optic link according to claim 9, wherein wavelengths for data signals propagating on inbound lines are different from data signals propagating on outbound lines.

2. (original): A link according to claim 1, characterized in that the wavelengths in the two transmission directions are chosen so that the backscattered signal originating from the signal in one transmission direction is strongly attenuated on passing through the receive filter of a channel in the other transmission direction.

3. (previously presented): The link according to claim 1, wherein the wavelengths in the two transmission directions are chosen so that the backscattered signal originating from the signal in one transmission direction is attenuated by a factor of at least 10 on passing through a receive filter of a channel in the other transmission direction.

4. (previously presented): A link according to claim 1, characterized by sending a wavelength division multiplex in each transmission direction, the wavelengths of the multiplex in one transmission direction being interleaved between the wavelengths of the multiplex in the other transmission direction.

5. (previously presented): The method according to claim 16, wherein wavelengths for data signals propagating on inbound lines are different from data signals propagating on outbound lines.

6. (original): A method according to claim 5, characterized in that the wavelengths in the two transmission directions are chosen so that the backscatterred signal originating from the signal in one transmission direction is strongly attenuated on passing through the receive filter of a channel in the other transmission direction.

7. (previously presented): The method claimed in claim 5, wherein the wavelengths in the two transmission directions are chosen so that the backscattered signal originating from the signal in one transmission direction is attenuated by a factor of at least 10 on passing through a receive filter of a channel in the other transmission direction.

8. (previously presented): A method according to claim 5, characterized by sending a wavelength division multiplex in each transmission direction, the wavelengths of the multiplex in one transmission direction being interleaved between the wavelengths of the multiplex in the other transmission direction.

9. (presently presented): An amplified and non-bi-directional fiber optic link including optical loopback of the amplifiers to enable COTDR, said fiber optic link comprising means for widening the spectrum of the signal in at least one transmission direction, wherein said means for widening the spectrum comprises wavelength modulation means.

Claim 10 (canceled).

11. (previously presented): The link according to claim 9, wherein the wavelength modulation means effect wavelength modulation with a modulation rate in the range from 0.5 kHz to 10 GHz.

12. (previously presented): The link according to claim 9, wherein the wavelength modulation means vary the wavelength over a range greater than a few times the bit rate of the link.

13. (previously presented): A link according to claim 9, characterized in that the spectrum widening means comprise means for modulating the injection current of a laser of a sender of at least one transmission direction.

14. (previously presented): An amplified and non-bi-directional fiber optic link including optical loopback of the amplifiers to enable COTDR, said fiber optic link comprising means for widening the spectrum of the signal in at least one transmission direction, wherein the means for widening the spectrum comprises phase modulation means.

15. (previously presented): The link according to claim 14, wherein the phase modulation means effect modulation at a modulation rate greater than a few times the bit rate of the link.

16. (previously presented): A method of reducing interaction between the signal in one transmission direction and backscattered noise originating from the other transmission direction in an amplified and non-bi-directional fiber optic link including optical loopback of the amplifiers to enable COTDR, wherein a spectrum of the signal in at least one transmission direction is widened by modulating a wavelength of the signal.

Claim 17 (canceled).

18. (previously presented): The method claimed in claim 16, wherein the modulation rate is in the range from 0.5 kHz to 10 GHz.

19. (previously presented): The method according to claim 16, wherein the wavelength modulation varies the wavelength over a range greater than a few times the bit rate of the link.

20. (previously presented): A method according to claim 16, characterized in that the spectrum is widened by modulating the injection current of a laser of a sender of at least one transmission direction.

21. (previously presented): A method of reducing interaction between the signal in one transmission direction and backscattered noise originating from the other transmission direction in an amplified and non-bi-directional fiber optic link including optical loopback of the amplifiers to enable COTDR, wherein a spectrum of the signal in at least one transmission direction is widened by phase modulation.

22. (previously presented): The method according to claim 21, wherein the modulation rate is greater than a few times the bit rate of the link.

23. (previously presented): The link according to claim 11, wherein the wavelength modulation means effect wavelength modulation with a modulation rate in the range from 1 kHz to 5 GHz.

24. (previously presented): The link according to claim 12, wherein the wavelength modulation means vary the wavelength over a range greater than twice the bit rate of the link.

25. (previously presented): The link according to claim 15, wherein the phase modulation means effect modulation at a modulation rate greater than twice the bit rate of the link.

26. (previously presented): The method claimed in claim 18, wherein the modulation rate is in the range from 1 kHz to 5 GHz.

27. (previously presented): The method according to claim 19, wherein the wavelength modulation varies the wavelength over a range greater than twice the bit rate of the link.

28. (previously presented): The method according to claim 22, wherein the modulation rate is greater than twice the bit rate of the link.

29. (previously presented): A system comprising an amplified and non-bi-directional fiber optic link having optical loopback of amplifiers to enable coherent optical time domain reflectometry (COTDR), wherein a signal transmitted in one direction has a different wavelength than a signal transmitted in another direction.

30. (previously presented): A method comprising the steps of:

providing an amplified and non-bi-directional fiber optic link having optical loopback of amplifiers to enable coherent optical time domain reflectometry (COTDR); and

reducing interaction between a first signal in one transmission direction and backscattered noise originating from another direction,

wherein the signal transmitted in said one direction has a different wavelength than a second signal transmitted in said another direction.

31. (previously presented): A system comprising,

an amplified and non-bi-directional fiber optic link having optical loopback of amplifiers to enable coherent optical time domain reflectometry (COTDR), said fiber optical link having means for widening a spectrum of a signal in at least one transmission direction.

32. (previously presented): A method comprising the steps of:

providing an amplified and non-bi-directional fiber optic link having optical loopback of amplifiers to enable coherent optical time domain reflectometry (COTDR); and

reducing interaction between a first signal in one transmission direction and backscattered noise originating from another direction,

wherein a spectrum of a signal in at least one transmission direction is widened.